Elbit Systems Land
Tank Ammunition Portfolio

Comprehensive combat-proven tank ammunition solutions

Elbit Systems™
Land

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Elbit Systems Land is a defense weapon systems house, specializing in the development, manufacture and integration of offensive and defensive solutions for the modern battlefield, homeland security and terror threats. The advanced systems and products for land, air and naval forces are developed by vertically integrated expert teams based on extensive experience with the Israel Defense Forces (IDF) and other leading armed forces. Most of the systems and products are combat-proven and have been qualified by the IDF, U.S. Military (Army, Air Force, and Navy), EU countries and NATO member states. The operational gun and tank ammunition are in service with the IDF and other users, providing the customers with excellent capabilities, performance and customized, affordable solutions.

Unmatched experience and quality

Elbit Systems offers unmatched experience and a comprehensive array of combat-proven, advanced ammunition solutions known for high performance (accuracy, lethality) at both short and long ranges. The ammunition is compatible with existing gun systems and is specifically designed for low barrel wear. The practice ammunition delivers identical external ballistics and accuracy to operational cartridges. They are designed to provide realistic, effective training and simulation, and for use in NATO proving grounds with a limited range.

Continuous innovation and development

At Elbit Systems Land, we emphasize development of innovative tank ammunition, ongoing improvement of existing ammunition, and development of new generations of tank ammunition. At the same time, we have full in-house manufacturing capabilities. The scope of our development and production enables us to conduct projects around the world, understand customer needs and expectations and provide them with the most appropriate product, often together with the involvement of local industry, including technology transfer as an added value.

Production facilities and capabilities

Elbit Systems Land has five facilities that are involved in the manufacture and testing of tank ammunition:

- **Central Laboratory –** R&D unit, develops ammunition, new technologies, performs analysis and simulations, and conducts operational research.
- **Metal Plant –** Produces all the ammunition metal components. Proven capabilities include forging, machining, coating and metallurgy inspection laboratory.
- **Chemical Plant –** Manufactures all the energetic materials required for ammunition such as propellants, HE, detonators, tracers, pyrotechnic components, primers etc.
- **LAP Plant –** the Loading Assembly and Packaging (LAP) plant integrates the ammunition components and sub-assemblies to provide the final product to the customer.
- **Testing Center –** Conducts all the static and dynamic tests for components including energetic materials before approving them to ship to the LAP plant. The testing center conducts the acceptance tests before supplying the product to the customer. In addition, the testing center supports all the needs of R&D in order to approve the proper functioning, performance, safety and reliability of the ammunition.

High-performance tank ammunition series

Elbit Systems Land's tank ammunition array is compliant with NATO and MIL-STD standards. The ammunition dramatically increases the fire power and capabilities of Armored Corps. The 105mm series is certified for any 105mm NATO gun such as M68, L7, F1 and equivalent firing systems. The 120mm series is certified for 120mm NATO smooth-bore guns used by Merkava 3 and 4, Leo2A4/A5/A6, M1A1/A2, K1A1/A2, K2, ARIETA, M60A3 MBTs and approved for firing from NATO 120mm smooth-bore gun systems L44/L55. The 125mm series is certified for T-72 and T-90 firing systems, and the 100mm series is designed to be fired from T54/T54B/T55 MBTs.

Elbit Systems Land provides ammunition with a high level of safety, reliability and quality.

120mm Series

105mm Series

125mm Series

100mm Series

120mm Smooth-Bore Guns

120mm Series

M322

APFSDS-T: Armor-Piercing, Fin-Stabilized Discarding-Sabot Tracer tank cartridge

The M322 is the 2nd generation high-velocity flat-trajectory cartridge, with excellent accuracy and penetration capabilities against modern armor protection. The robust cartridge has low barrel wear and is fully compliant with NATO STANAG 4385 and 4493. The M322 is compatible with NATO 120mm L44 and L55 smooth-bore guns. The M322 is approved for use with Leopard 2, Ariete, K1A1/A2, M60A3, Merkava 3 & 4 and other 120mm MBTs (NSN: 1315-15-150-0168).

Technical specifications	Performance
Type: APFSDS-T	Muzzle velocity (+21°C): 1,705 m/s (L44)
NSN: 1315-15-150-0168	Accuracy/Dispersion (typical): 0.2X0.2 mil
Cartridge weight: Approx. 20kg	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
Cartridge length: 984mm	
Penetrator: Tungsten alloy	
Cartridge case: Combustible	
Propellant NC-NG: Approx. 8kg	
Packaging: Metal container	

M338

APFSDS-T: Armor-Piercing, Fin-Stabilized Discarding-Sabot Tracer tank cartridge

The M338 is the 3rd generation high-velocity flat-trajectory cartridge, with excellent accuracy and penetration capabilities against MBTs with modern armor and a heavy reactive protection shield. The cartridge incorporates a Low Vulnerability (LOVA) type propellant and is fully compliant with NATO STANAG 4385 and 4493. The M338 is compatible with NATO 120mm L44 and L55 smooth-bore guns.

Technical specifications	Performance
Type: APFSDS-T	Muzzle velocity (+21°C): 1,680 m/s (L44)
Cartridge weight: Approx. 21kg	Accuracy/Dispersion (typical): 0.2X0.2 mil
Cartridge length: 984mm	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
Penetrator: Tungsten alloy	
Cartridge case: Combustible	
Propellant (LOVA): Approx. 8kg	
Packaging: Metal container	

M339

HE-MP-T: High Explosive Multi-Purpose Tracer tank cartridge

The M339 is the ultimate multi-purpose tank ammunition for field and urban warfare. The M339 delivers high hit probability and lethality with low collateral damage at all combat ranges. The cartridge destroys bunkers, field fortification and urban structures, LAVs and APCs with medium protection armor and is highly lethal against dismounted infantry. The M339 is capable of penetrating 200mm double reinforced concrete walls and operating the warhead with delay. The programmable, multifunctional fuze has three modes of operation: Point Detonation Delay (PDD), Point Detonation (PD) and Air Burst (AB). The M339 complies with MIL-SPEC requirements and NATO STANAG 4385 and 4493. It is compatible with NATO 120mm smooth-bore guns, L44 and L55. The M339 is designed for use with Leopard 2A4/A5/A6, Ariete, K1A1/A2, K2, M1A1/A2, M60A3, Merkava 3 & 4 and other 120mm MBTs.

Technical specifications	Performance
Type: HE-MP-T	Muzzle velocity (+21°C): 900 m/s (L44)
Cartridge weight: Approx. 27 kg	Accuracy/Dispersion (typical): 0.3X0.3 mil
Cartridge length: 984mm	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
Projectile weight: 17kg	
High Explosive CLX663: 2.3kg	
Fuze: Electronic/programmable/ multifunctional	
Cartridge case: Combustible	
Propellant NC-NG: Approx. 4.5kg	
Packaging: Metal container	

M325

HEAT-MP-T: High-Explosive Anti-Tank Multi-Purpose cartridge

The M325 is a multi-purpose tank cartridge, designed to defeat medium and light armored vehicles, and infantry out in the open. Advanced technology support high hit probability and increased effective range of over 4km. The M325 complies with MIL-STD and NATO STANAG 4385 and 4493. The cartridge is compatible with NATO 120mm L44 and L55 smooth-bore cannons. The M325 is approved for use with Leopard 2, Ariete, K1A1/A2, M60A3, Merkava 3 & 4 and other 120mm MBTs.

Technical specifications	Performance
Type: HE-MP-T	Muzzle velocity (+21°C): 1,078 m/s (L44)
NSN: 1315-15-150-0167	Accuracy/Dispersion (typical): 0.25X0.25 mil
Cartridge weight: Approx. 25kg	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
Cartridge length: 984mm	
High Explosive Comp. B: 1.8kg	
Fuze: PIBD, electric	
Cartridge case: Combustible	
Propellant M26/M30: Approx. 5.6kg	
Packaging: Metal container	

M337

STUN cartridge

The M337 STUN cartridge is characterized as less-than-lethal ammunition, designed for use in low intensity conflicts. The cartridge creates a flash, bang and blast effect used to deter violence. The stun unit also disperses plastic flakes in the vicinity of the tank. The M337 is compatible with all NATO 120mm smooth-bore guns.

Technical specifications	Performance
Types: STUN	Temperature limits: Firing: -40 to +52°CL44) Storage: -40 to +63°C
Cartridge weight: Approx. 13.5kg	
Cartridge length: 814mm	
Stun unit weight: 3.5kg	
Cartridge case: Combustible	
Propellant M30: Approx. 6kg	
Packaging: Metal container	

M324

TPCSDS-T:Target-Practice Cone-Stabilized Discarding-Sabot Tracer tank cartridge

The M324 training cartridge is designed to simulate an operational APFSDS cartridge firing, with similar external ballistics and accuracy to the operational cartridge, with a reduced safety zone. The cartridge is compatible with NATO 120mm L44 and L55 smooth-bore guns. The M324 complies with MIL-STD and NATO STANAG 4385 and 4493. The M324 is approved for use with Leopard 2 (similar ballistics as DM38/48/M865), Ariete, K1A1/A2, M60A3, Merkava 3 & 4 and other 120mm MBTs.

Technical specifications	Performance
Type: TPCSDS-T	Muzzle velocity (+21°C): 1,730 m/s (L44)
NSN: 1315-31-016-9687	Accuracy/Dispersion (typical): 0.2X0.2 mil
Cartridge weight: Approx. 18.3kg	Safety zone: 7.5km
Cartridge length: 925mm	Training range: Up to 2km
Penetrator: Steel	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
Cartridge case: Combustible	
Propellant NC-NG: Approx. 7.8kg	
Packaging: Metal container	

M340

TP-T (HE-MP-T) cartridge

The M340 is a training cartridge for the M339 HE-MP-T operational cartridge, with identical external and internal ballistics and excellent accuracy. The cartridge complies with NATO STANAG 4385, 4493 and MIL-SPEC standards. The M340 can be fired with NATO 120mm smooth-bore guns, L44 and L55 and is designed for use with Leopard 2A4/A5/A6, Ariete, K1A1/A2, K2, M1A1/A2, M60A3, Merkava 3 & 4 and other 120mm MBTs.

Technical specifications	Performance
Type: TP-T (HE-MP)	Muzzle velocity (+21°C): 900 m/s (L44)
Cartridge weight: Approx. 27kg	Accuracy/Dispersion (typical): 0.3X0.3 mil
Cartridge length: 984mm	Training range: Up to 5km
Projectile: Inert	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
Cartridge case: Combustible	
Propellant NC-NG: Approx. 4.5kg	
Packaging: Metal container	

M326

TP-T (HEAT) cartridge

The M326 is a training cartridge for the HEAT-MP-T (M325) operational cartridge, with identical external and internal ballistics. The M326 complies with MIL-STD and NATO STANAG 4385 and 4493. The cartridge is compatible with NATO 120mm L44 and L55 smooth-bore guns, and is approved for use with Leopard 2, Ariete, K1A1/A2, M60A3, Merkava 3 & 4, and other 120mm MBTs.

Technical specifications	Performance
Type: TP-T (HEAT)	Muzzle velocity (+21°C): 1,078 m/s (L44)
NSN: 1315-15-170-5338	Accuracy/Dispersion (typical): 0.25X0.25 mil
Cartridge weight: Approx. 25kg	Training range: 4km
Cartridge length: 984mm	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
Projectile: Inert	
Cartridge case: Combustible	
Propellant M30/M26: Approx. 5.6kg	
Packaging: Metal container	

M303

TP-T AFFORDABLE

The M303 is a training cartridge specially developed to provide an affordable training solution to the Armored Corps. The M303 complies with MIL-STD and NATO STANAG 4385 and 4493. The cartridge is compatible with NATO 120mm L44 and L55 smooth-bore guns and is designed for use with Leopard 2A4/A5/A6, Ariete, K1A1/A2, K2, M1A1/A2, M60A3, Merkava 3 & 4 and other 120mm MBTs.

Technical specifications	Performance
Type: TP-T	Muzzle velocity (+21°C): 1,150 m/s (L44)
Cartridge weight: Approx. 22kg	Accuracy/Dispersion (typical): 0.30X0.30 mil
Cartridge length: 984mm	Safety zone: 6.1km
Projectile: Inert	Training range: Up to 2.5km
Cartridge case: Combustible	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
Propellant NC-NG: Approx. 5.6kg	
Packaging: Metal container	

105mm Series

M428 (SWORD)

APFSDS-T: Armor-Piercing, Fin-Stabilized Discarding-Sabot Tracer tank cartridge

The M428 is a 4th generation high-velocity flat-trajectory APFSDS-T cartridge. The cartridge is the primary anti-armor 105mm tank cartridge in service with the IDF. The M428 sub-projectile is capable of defeating modern armor systems, with excellent penetration capabilities due to its shape and the unique mechanical properties of its tungsten alloy penetrator. The sabot design contributes to high accuracy at all combat ranges. The M428 is designed for use with the M68, L7, F1 or equivalent guns (NATO STANAG 4458). It is type classified by the IDF and NATO.

Technical specifications	Performance
Type: APFSDS-T	Muzzle velocity (+21°C): 1,505 m/s
NSN: 1315-20-000-8722	Accuracy/Dispersion (typical): 0.2X0.2 mil
Cartridge weight: Approx. 18.8kg	Temperature limits: Firing: -40 to +52°C Storage: -46 to +63°C
Cartridge length: 1000mm	
Penetrator: Tungsten alloy	
Cartridge case: Brass	
Propellant NC-NG: Approx. 5.8kg	
Packaging: Metal container	

M426

APFSDS-T: Armor-Piercing, Fin-Stabilized Discarding-Sabot Tracer tank cartridge

The M426 is a 3rd generation high-velocity flat-trajectory APFSDS-T cartridge. The cartridge is the anti-armor 105mm tank cartridge in service with the IDF and many other armies worldwide. The M426 sub-projectile is capable of defeating modern MBTs, with high hit probability and penetration capabilities at all combat ranges. The M426 is designed for use with the M68, L7, F1 or equivalent guns (NATO STANAG 4458). It is type classified by the BWB (DM63) and by the IDF.

Technical specifications	Performance
Type: APFSDS-T	Muzzle velocity (+21°C): 1,455 m/s
NSN: 1315-15-170-5337	Accuracy/Dispersion (typical): 0.2X0.2 mil
Cartridge weight: Approx. 19.2kg	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
Cartridge length: 990mm	
Penetrator: Tungsten alloy	
Cartridge case: Brass	
Propellant NC-NG: Approx. 6kg	
Packaging: 1 Cartridge in fiber container, 2 fiber containers in plywood box	

M110

HE-MP-T: High-Explosive Multi-Purpose Tracer tank cartridge

The ultimate multi-purpose tank ammunition for the modern battlefield, the M110 delivers high hit probability and lethality with low collateral damage at all combat ranges. It is capable of penetrating double reinforced concrete walls >200mm, with an effective range of > 5km. The cartridge is designated to destroy bunkers, field fortifications and urban structures, LAVs, to breach walls and is highly lethal against dismounted infantry and AT/ATGM squads. The programmable, electronic fuze has three modes of operation: Point Detonation Delay (PDD), Super Quick/Point Detonation (PD) and Air Burst (AB). The M110 complies with MIL-SPEC requirements and NATO STANAG 4458.

Technical specifications	Performance
Type: HE-MP-T	Muzzle velocity (+21°C): 800 m/s
Cartridge weight: Approx. 23.5kg	Accuracy/Dispersion (typical): 0.3X0.3 mil
Cartridge length: 990mm	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
Projectile weight: 13.6kg	
High Explosive CLX663: Approx. 1kg	
Fuze: Electronic/programmable/ multifunctional	
Cartridge case: Brass	
Propellant NC-NG: Approx. 3kg	
Packaging: Metal container	

M152/3

I-HEAT-T: Improved High-Explosive Anti-Tank Tracer tank cartridge

A dual-purpose tank cartridge, the M152/3 is used against medium and light armored vehicles, bunkers and field fortifications and to incapacitate infantry by blast and fragmentation. Retaining all the physical properties and identical internal and external ballistics of the M456A1 cartridge, the M152/3 delivers improved penetration capabilities and enhanced reliability. The improved performance of the 105mm I-HEAT-T is attributable to a unique shaped charge warhead design, which results in higher penetration. The M152/3 can be used with the M68, L7, F1 or equivalent guns (NATO STANAG 4458) and is type classified by the IDF, KMW and others.

Technical specifications	Performance
Type: I-HEAT-T	Muzzle velocity (+21°C): 1,173 m/s
Cartridge weight: Approx. 22kg	Accuracy/Dispersion (typical): 0.30X0.30 mil
Cartridge length: 991mm	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
High Explosive Comp. B: 1kg	
Fuze: Electric	
Cartridge case: Brass	
Propellant M30: Approx. 5.2kg	
Packaging: 1 Cartridge in fiber container, 2 fiber containers in plywood box	

M156

HESH-T (HEP-T): High-Explosive Squash-Head Tracer tank cartridge

A general-purpose cartridge, the M156 is used against light and medium armored targets, light materiel, vehicles and with blast and fragmentation effects against infantry. The cartridge can be used with M68, L7, F1 or equivalent guns (NATO STANAG 4458). The M156 cartridge is type classified by the IDF and is equivalent to the HESH-T L35 and HEP-T M393A1/A2 cartridges.

Technical specifications	Performance
Type: HESH-T	Muzzle velocity (+21°C): 731 m/s
Cartridge weight: Approx. 21.2kg	Accuracy/Dispersion (typical H+B): 171cm
Cartridge length: 939mm	Maximum range: 9,500m
High Explosive Comp. A3: Approx. 2.2kg	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
Cartridge case: Brass	
Propellant M6: Approx. 2.8kg	
Packaging: 1 Cartridge in fiber container, 2 fiber containers in plywood box	

M436

STUN: Less-Than-Lethal cartridge

The M436 STUN cartridge is characterized as less-than-lethal ammunition,designed for use in low intensity conflicts. Its STUN unit disperses plastic flakes in the vicinity of the tank. The cartridge's flash, bang and blast effects are used to deter violence. The M436 is designed for use with M68, L7, F1 or equivalent guns (NATO STANAG 4458). The M436 cartridge is highly effective in urban and other populated terrains.

Technical specifications	Performance
Types: STUN	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
Cartridge weight: Approx. 14.4kg	
Cartridge length: 830mm	
Stun unit weight: 2.5kg	
Cartridge case: Brass	
Propellant M30: Approx. 5kg	
Packaging: 1 Cartridge in fiber container, 2 fiber containers in plywood box	

M157

TP-T (HESH): Target-Practice Tracer tank cartridge

The M157 cartridge serves as a training round to the M156 HESH-T and to the M158 SMOKE operational ammunitions, delivering an identical trajectory to the M156/M158. The cartridge is designed for use with M68, L7, F1 or equivalent (NATO STANAG 4458) cannons. The M157 is type classified by the IDF.

Technical specifications	Performance
Type: TP-T (HESH)	Muzzle velocity (+21°C): 731 m/s
Cartridge weight: Approx. 21.2kg	Accuracy/Dispersion (typical H+B): 171cm
Cartridge length: 939mm	Training range: Up to 2km
Projectile: Inert	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
Cartridge case: Brass	
Propellant M6: Approx. 2.8kg	
Packaging: 1 Cartridge in fiber container, 2 fiber containers in plywood box	

M420/4

TPCSDS-T: Target-Practice Cone-Stabilized Discarding - Sabot Tracer tank cartridge

The M420/4 is a training cartridge with a unique cone stabilizer concept that reduces the safety zone required for tank gunnery practice in short-range training areas, with a safety range (10° elevation) of 7.5km. The M420/4 trajectory is similar to that of the operational APFSDS-T M426 and M428 cartridges, up to a range of 2km. The cartridge is designed for use with M68, L7, F1 or equivalent guns (NATO STANAG 4458). The M420/4 is type classified by the IDF and other users.

Technical specifications	Performance
Type: TPCSDS-T	Muzzle velocity (+21°C): 1,630 m/s
Cartridge weight: Approx. 16.8 kg	Accuracy/Dispersion (typical): 0.2X0.2 mil
Cartridge length: 885mm	Safety zone: 7.5 km
Penetrator: Steel	Training range: Up to 2km
Cartridge case: Brass	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
Propellant NC-NG/M30: Approx. 5.7kg	
Packaging: 1 Cartridge in fiber container, 2 fiber containers in plywood box	

M161

TP-T (HEAT-T): Target - Practice Tracer

The M161 is a training cartridge simulating the I-HEAT M152/3 and M456A1 operational ammunitions, with a similar trajectory. The cartridge is designed for use with M68, L7, F1 or equivalent guns (NATO STANAG 4458). The M161 is type classified by the IDF and other users and is equivalent to M490stype cartridges.

Technical specifications	Performance
Type: TP-T (HEAT)	Muzzle velocity (+21°C): 1,173 m/s
Cartridge weight: Approx. 22kg	Accuracy/Dispersion (typical): 0.30X0.30 mil
Cartridge length: 991mm	Training range: Up to 2.5km
Projectile: Inert	Temperature limits: Firing: -40 to +52°C Storage: -40 to +63°C
Cartridge case: Brass	
Propellant M30: Approx. 5.2kg	
Packaging: 1 Cartridge in fiber container, 2 fiber containers in plywood box	

REUSE OF AMMUNITION

Conversion/Renovation cartridge

This cost-effective solution saves procurement costs of new ammunition and solves the problem of storage and disposal of old/unused ammunition.

Conversion – conversion of 105mm APFSDS operational cartridges to training cartridges enables using old and unused operational cartridges for training purposes. The converted cartridge has similar firing procedures, recoil behavior and acoustic effects as the operational cartridge, as well as accuracy and external ballistics. It can be tailored to meet specific local range safety requirements/limits.

Renovation – renovation of any 105mm cartridges from stock extends the shelf life of old cartridges and enables them to be reused at a high safety level.
We provide the renovation kit, knowhow and technical assistance for renovating the ammo at the user site.

125mm Series

M711/8 (MK2)

APFSDS-T: Armor-Piercing, Fin-Stabilized Discarding-Sabot Tracer tank cartridge

The M711/8, is the 3rd generation high-velocity flat-trajectory APFSDS-T cartridge, consists of a projectile unit and a main (standard) charge. The projectile unit, comprising a four segments type sabot and a sub-projectile, is fitted into a combustible case that contains the propelling charge. The M711/8 has superior penetration capability against modern armor systems at extended ranges due to its unique shape and mechanical properties of its tungsten alloy penetrator. The design of the sabot and the sub-projectile contribute to high accuracy performance at all combat ranges. The M711/8 is designed for use with the T72/ T90 and other MBTs equipped with a 125mm firing system.

Technical specifications	Performance
Type: APFSDS-T	Muzzle velocity (+21°C): 1,660 m/s
Projectile weight: 7.55kg	Accuracy/Dispersion (typical): 0.25X0.25 mil
Projectile unit length: 678mm max.	Temperature limits: Firing: -40 to +50°C Storage: -40 to +70°C
Penetrator: Tungsten alloy	
Cartridge case: Combustible	
Propellant single base (front + rear): Approx. 8.5kg	
Packaging: Metal container	

M711 (MK1)

APFSDS-T: Armor-Piercing, Fin-Stabilized Discarding - Sabot Tracer tank cartridge

The M711, is the 2nd generation high-velocity flat-trajectory APFSDS-T cartridge, consists of a projectile unit and a main (standard) charge. The projectile unit, comprising a four segments type sabot and a sub-projectile, is fitted into a combustible case that contains the propelling charge. The M711 has superior penetration capability against advanced armor systems at extended ranges, due to its unique shape and mechanical properties of its tungsten alloy penetrator. The M711 is designed for use with the T72/T90 and other MBTs equipped with a 125mm firing system.

Technical specifications	Performance
Type: APFSDS-T	Muzzle velocity (+21°C): 1,660 m/s
Projectile weight: 7.89kg	Accuracy/Dispersion (typical): 0.25X0.25 mil
Projectile unit length: 678mm max.	Temperature limits: Firing: -40 to +50°C Storage: -40 to +70°C
Penetrator: Tungsten alloy	
Cartridge case: Combustible	
Propellant single base (front + rear): Approx. 8.5kg	
Packaging: Metal container	

M713

TPCSDS-T: Target-Practice Cone-Stabilized Discarding-Sabot Tracer tank cartridge

The M713 training cartridge is used to simulate operational APFSDS-T cartridge firing, with similar external ballistics and accuracy to the operational cartridge, up to 2km, with a reduced safety zone. The M713 is designed for use with the T72/T90 and other MBTs equipped with a 125mm firing system.

Technical specifications	Performance
Type: TPCSDS-T	Muzzle velocity (+21°C): 1,690 m/s
Projectile weight: 5.8kg	Accuracy/Dispersion (typical): 0.30X0.30 mil
Projectile unit length: 678mm max.	Temperature limits: Firing: -40 to +50°C Storage: -40 to +70°C
Penetrator: Steel	
Cartridge case: Combustible	
Propellant single base (front + rear): Approx. 8.5kg	
Packaging: Metal container	

M710/1

HE-PDD-T: High-Explosive Point Detonation Delay Tracer tank cartridge

The M710/1 HE tank cartridge delivers high hit probability at all combat ranges, with high performance, quality, safety and reliability. The cartridge is capable of penetrating 200mm double reinforced concrete walls. It destroys bunkers, field fortifications and urban structures, LAVs and APCs with medium armor protection. The electronic fuze mode of operation is Point Detonation Delay (PDD). The M710/1 has the same trajectory as the HE fragmentation cartridge - 30F26. The M710/1 complies with MIL-SPEC requirements and NATO standards. The M710/1 is designed for use with the T72/T80/T90 and other MBTs with a 125mm firing system.

Technical specifications	Performance
Type: HE-MP-T	Muzzle velocity (+21°C): 870 m/s
Projectile weight: Approx. 23kg	Accuracy/Dispersion (typical): 0.30X0.30 mil
Projectile length: 675mm	Temperature limits: Firing: -40 to +50°C Storage: -40 to +70°C
High Explosive CLX663: 2.5kg	
Fuze: Electronic/programmable/ multifunctional	
Cartridge case: Combustible	
Propellant single base: Approx. 5.7kg	
Packaging: Metal container	

M710/2

HE-PD-T: High-Explosive Point Detonation Tracer tank cartridge

The M710/2 HE-PD tank cartridge delivers high hit probability at all combat ranges, with high performance, quality, safety and reliability. The cartridge is capable of breaching 200mm double reinforced concrete walls. It destroys bunkers, field fortifications and urban structures, LAVs and APCs with medium armor protection and is capable of wall breaching. The electronic fuze mode of operation is Point Detonation (PD). The M710/2 has the same trajectory as the HE fragmentation cartridge - 30F26. The M710/2 complies with MIL-SPEC requirements and NATO standards. The cartridge is designed for use with the T72/T80/T90 and other MBTs equipped with a 125mm firing system.

Technical specifications	Performance
Type: HE-MP-T	Muzzle velocity (+21°C): 870 m/s
Projectile weight: Approx. 23kg	Accuracy/Dispersion (typical): 0.30X0.30 mil
Projectile length: 675mm	Temperature limits: Firing: -40 to +50°C Storage: -40 to +70°C
High Explosive CLX663: 2.5kg	
Fuze: Electronic/programmable/ multifunctional	
Cartridge case: Combustible	
Propellant single base: Approx. 5.7kg	
Packaging: Metal container	

100mm Series

M309

APFSDS-T: Armor-Piercing, Fin-Stabilized Discarding-Sabot Tracer tank cartridge

The M309 is a high-velocity flat-trajectory APFSDS-T cartridge. The M309 sub-projectile is capable of defeating modern MBTs and advanced armor systems, with high hit probability and penetration capabilities at all combat ranges. The M309 is designed for use with the T54/T54B/T55 and other MBTs equipped with a 100mm firing system.

Technical specifications	Performance
Type: APFSDS-T	Muzzle velocity (+21°C): 1,400 m/s
Cartridge weight: Approx. 21.3kg	Accuracy/Dispersion (typical): 0.30X0.30 mil
Cartridge length: 1,060mm	Temperature limits: Firing: -40 to +50°C Storage: -40 to +70°C
Penetrator: Tungsten alloy	
Cartridge case: Brass	
Propellant NC-NG: Approx. 6kg	
Packaging: Fiber container	

M310

HE-MP-T: High-Explosive Multi-Purpose Tracer tank cartridge

The ultimate multi-purpose tank cartridge for the modern battlefield, the M310 delivers high hit probability and lethality at all combat ranges. It is capable of penetrating 200mm double reinforced concrete walls, with an effective range of more than 4km. The cartridge is designed to destroy bunkers, field fortifications and urban structures, LAVs and APCs with medium armor protection, to breach walls, and is highly lethal against dismounted infantry. Its programmable, electronic fuze has three modes of operation: Point Detonation Delay (PDD), Super Quick/Point Detonation (PD), and Air Burst (AB). The M310 complies with MIL-SPEC requirements and NATO standards. The M310 is designed for use with the T54/T54B/T55 and other MBTs equipped with a 100mm firing system.

Technical specifications	Performance
Type: HE-MP-T	Muzzle velocity (+21°C): 800 m/s
Cartridge weight: Approx. 22kg	Accuracy/Dispersion (typical): 0.30X0.30 mil
Cartridge length: 1000mm	Temperature limits: Firing: -40 to +50°C Storage: -40 to +70°C
High Explosive CLX663: 1.4kg	
Fuze: Electronic/programmable/ multifunctional	
Cartridge case: Brass	
Propellant NC-NG: Approx. 3.2kg	
Packaging: Fiber container	

120mm Smooth-Bore Guns

MG251/ MG251-LR/MG253

All Merkava MBTs are equipped with Elbit Systems guns:

MG251: Installed in all Merkava MK.3 MBTs.

MG251-LR: Currently in production for Merkava MK4 MBTs.

MG253: 170 guns were adapted and produced.

The MG251 and MG251-LR are battle-proven guns, type classified by the IDF/ IMOD. The guns are based on smooth-bore L-44 barrels. MG251 and MG251-LR are semi-automatic, electrically fired, dropping breech block, and manually loaded guns. MG251 and MG251-LR impose relatively low recoil forces due to optimal retarder design features. Their compact, concentric design requires small turret apertures, making the MG251 and MG251-LR a perfect match to install on other turrets, to replace the gun with minimal modifications. Both guns are interoperable with NATO standard ammunition and fully comply with STANAG 4385, MIL-STD-810D and EMC requirements.

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